

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1       **Claim 1 (previously presented):** A radio receiver  
2       comprising:

3       a gain controlling means for controlling a gain of the  
4       radio receiver;

5       an electric field intensity detecting means for detecting  
6       an electric field intensity of a received signal;

7       an error rate measuring means for measuring an error rate  
8       of the received signal;

9       a threshold setting means for setting a threshold of an  
10      electric field intensity level based on the measured error  
11      rate of the received signal, wherein said threshold setting is  
12      varied depending on a transmission condition; and

13      a first controlling means for causing the gain controlling  
14      means to start the gain control operation when the electric  
15      field intensity detected by the electric field intensity  
16      detecting means reaches the threshold of the electric field  
17      intensity level.

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**Claim 2 (canceled)**

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1       **Claim 3 (currently amended):** A radio receiver for  
2       receiving a signal having a signal format that is transmitted

3 while changing transmission conditions into two types or more,  
4 comprising:

5 a gain controlling means for controlling a gain of the  
6 radio receiver;

7 an electric field intensity detecting means for detecting  
8 an electric field intensity of a received signal;

9 a gain control threshold setting means for automatically  
10 setting a threshold of an electric field intensity level used  
11 as a gain control threshold based on ~~the~~ a transmission  
12 ~~condition~~ data speed of the received signal, wherein said  
13 threshold setting is varied depending on said transmission  
14 data speed ~~condition~~; and

15 a first controlling means for causing the gain controlling  
16 means to start the gain control operation when the electric  
17 field intensity detected by the electric field intensity  
18 detecting means reaches the threshold of the electric field  
19 intensity level set by the gain threshold setting means.

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1 **Claim 4 (canceled).**

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1 **Claim 5 (previously presented):** A radio receiver  
2 according to any one of claims 1 or 3, wherein the gain  
3 controlling means is a step-wise gain control type which  
4 changes the gain by a predetermined amount when a signal level  
5 of the received signal exceeds a predetermined level.

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1       **Claim 6 (original):** A radio receiver according to any one  
2 of claims 1 or 3, wherein the gain controlling means is a  
3 continuous gain control type which changes the gain in  
4 response to a signal level of the received signal.

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1       **Claim 7 (previously presented):** A radio receiver  
2 according to claim 1, wherein the threshold setting means  
3 decides a change direction and/or a change amount of the  
4 threshold of the electric intensity level in a succeeding  
5 reception based on a measured result by the error rate  
6 measuring means in a present reception and a measured result  
7 by the error rate measuring means in a preceding reception.

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1       **Claim 8 (original):** A radio receiver according to claim  
2 1, wherein the threshold setting means decides a change  
3 direction and/or a change amount of the threshold of the  
4 electric field intensity level in a succeeding reception based  
5 on a measured result by the error rate measuring means in a  
6 present reception, a measured result by the error rate  
7 measuring means in a preceding reception, the threshold of  
8 electric field intensity level set in a present reception, and  
9 a set value of the threshold of electric intensity level in  
10 the preceding reception.

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1       **Claim 9 (original):** A radio receiver according to any one  
2 of claims 1, 7 or 8, further comprising:

3 a threshold range setting means for setting an available  
4 set range of the threshold of electric intensity level, which  
5 is defined by a maximum value and a minimum value.

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1 **Claim 10 (original):** A radio receiver according to any  
2 one of claims 1, 7 or 8, wherein the threshold setting means  
3 does not change a setting of the threshold of electric  
4 intensity level when the threshold of electric intensity level  
5 is more than the maximum value or is less than the minimum  
6 value of the available set range and a measured result by the  
7 error rate measuring means is less than a predetermined value.

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1 **Claim 11 (original):** A radio receiver according to any  
2 one of claims 7 or 8, further comprising:

3 a storing means for updating/holding the measured result  
4 by the error rate measuring means in the present reception as  
5 a measured result by the error rate measuring means in the  
6 preceding reception, updating/holding the threshold of  
7 electric intensity level set in the present reception as the  
8 set value of the threshold of electric intensity level in the  
9 preceding reception, and updating/holding the threshold of  
10 electric intensity level set by the threshold setting means in  
11 the present reception as the threshold of electric intensity  
12 level set in a succeeding reception.

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1       **Claim 12 (previously presented):** A radio receiver  
2 comprising:

3       a gain controlling means for controlling a gain of the  
4 radio receiver;

5       an error rate measuring means for measuring an error rate  
6 of the received signal;

7       a gain control amount setting means for setting a gain  
8 control amount of the gain controlling means in response to  
9 the error rate; and

10       a second controlling means for causing the gain  
11 controlling means to change the gain in response to the gain  
12 control amount, wherein

13               the gain control amount setting means decides a  
14 change direction and/or a change amount of the gain control  
15 amount in a succeeding reception based on a measured result by  
16 the error rate measuring means in a present reception and a  
17 measured result by the error rate measuring means in a  
18 preceding reception.

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1       **Claim 13 (previously presented):** A radio receiver  
2 comprising:

3       a gain controlling means for controlling a gain of the  
4 radio receiver;

5       an error rate measuring means for measuring an error rate  
6 of the received signal;

7        a gain control amount setting means for setting a gain  
8        control amount of the gain controlling means in response to  
9        the error rate; and

10       a second controlling means for causing the gain  
11       controlling means to change the gain in response to the gain  
12       control amount, wherein

13       the gain control amount setting means decides a change  
14       direction and/or a change amount of the gain control amount in  
15       a succeeding reception based on a measured result by the error  
16       rate measuring means in a present reception, a measured result  
17       by the error rate measuring means in a preceding reception,  
18       the gain control amount set in a present reception, and a set  
19       value of the gain control amount in the preceding reception.

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1       **Claim 14 (previously presented):**    A radio receiver  
2       according to any one of claims 12 or 13, further comprising:

3       a gain control amount range setting means for setting an  
4       available set range of the gain control amount, which is  
5       defined by a maximum value and a minimum value.

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1       **Claim 15 (previously presented):**    A radio receiver  
2       according to any one of claims 12 or 13, wherein the gain  
3       control amount setting means does not change a setting of the  
4       gain control amount when the gain control amount is more than  
5       a maximum value or is less than a minimum value of the

6 available set range and a measured result by the error rate  
7 measuring means is less than a predetermined value.

1 **Claim 16 (original):** A radio receiver according to any  
2 one of claims 12 or 13, further comprising:

3 a storing means for updating/holding the measured result  
4 by the error rate measuring means in the present reception as  
5 a measured result by the error rate measuring means in the  
6 preceding reception, updating/holding the gain control amount  
7 set in the present reception as the set value of the gain  
8 control amount in the preceding reception, and  
9 updating/holding the gain control amount set by the gain  
10 control amount setting means in the present reception as the  
11 gain control amount set in a succeeding reception.

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1 **Claim 17 (previously presented):** A radio receiving method  
2 used for a radio receiver including a gain controlling means  
3 for controlling a gain of the radio receiver, an electric  
4 field intensity detecting means for detecting an electric  
5 field intensity of a received signal, and an error rate  
6 measuring means for measuring an error rate of the received  
7 signal, comprising:

8 an error rate measuring step of measuring the error rate  
9 in the receiving step by the error rate measuring means;

10 a threshold setting step of setting a threshold of  
11 electric intensity level based on the measured error rate of

12 the received signal, wherein said threshold setting is varied  
13 depending on a transmission condition; and

14 a first controlling step of causing the gain controlling  
15 means to start the gain control operation when the electric  
16 field intensity detected by the electric field intensity  
17 detecting means reaches the threshold of electric intensity  
18 level.

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1 **Claim 18 (previously presented):** A radio receiving method  
2 according to claim 17, further comprising:

3 a receiving step of performing a reception at the set  
4 threshold of the electric intensity level;

5 wherein the threshold setting step decides a change  
6 direction and/or a change amount of the threshold of electric  
7 intensity level in a succeeding reception based on a measured  
8 result by the error rate measuring means in a present  
9 reception and a measured result by the error rate measuring  
10 means in a preceding reception.

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1 **Claim 19 (previously presented):** A radio receiving method  
2 according to claim 17, further comprising:

3 a receiving step of performing a reception at the set  
4 threshold of electric intensity level;

5 wherein the threshold setting step decides a change  
6 direction and/or a change amount of the threshold of electric  
7 intensity level in a succeeding reception based on a measured



8 result by the error rate measuring means in a present  
9 reception, a measured result by the error rate measuring means  
10 in a preceding reception, the threshold of electric intensity  
11 level set in a present reception, and a set value of the  
12 threshold of electric intensity level in the preceding  
13 reception.

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1 **Claim 20 (original):** A radio receiving method according  
2 to any one of claims 17, 18 or 19, further comprising:

3 a threshold range setting step of setting an available set  
4 range of the threshold of electric intensity level, which is  
5 defined by a maximum value and a minimum value.

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1 **Claim 21 (previously presented):** A radio receiving method  
2 according to any one of claims 17, 18 or 19, wherein the  
3 threshold setting step does not change a setting of the  
4 threshold of electric intensity level when the threshold of  
5 electric intensity level is more than a maximum value or is  
6 less than a minimum value of the available set range and a  
7 measured result by the error rate measuring means is less than  
8 a predetermined value.

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1 **Claim 22 (original):** A radio receiving method according  
2 to any one of claims 18 or 19, further comprising:

3 a storing step of updating/holding the measured result by  
4 the error rate measuring means in the present reception as a

5 measured result by the error rate measuring means in the  
6 preceding reception, updating/holding the threshold of  
7 electric intensity level set in the present reception as the  
8 set value of the threshold of electric intensity level in the  
9 preceding reception, and updating/holding the threshold of  
10 electric intensity level set by the threshold setting means in  
11 the present reception as the threshold of electric intensity  
12 level set in a succeeding reception.

**Claim 23 (canceled)**

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1 **Claim 24 (previously presented):** A radio receiving method  
2 used for a radio receiver including a gain controlling means  
3 for controlling a gain of the radio receiver, and an error  
4 rate measuring means for measuring an error rate of the  
5 received signal, comprising:

6 a gain control amount setting step of setting a gain  
7 control amount of the gain controlling means in response to a  
8 measured result of the error rate measuring means;

9 a second controlling step of causing the gain controlling  
10 means to change a gain in response to the gain control amount;

11 a receiving step of performing a reception at the set gain  
12 control amount; and

13 an error rate measuring step of measuring the error rate  
14 in the receiving step by the error rate measuring means; and

15 wherein the gain control amount setting step decides a  
16 change direction and/or a change amount of the gain control  
17 amount in a succeeding reception based on a measured result by  
18 the error rate measuring means in a present reception and a  
19 measured result by the error rate measuring means in a  
20 preceding reception.

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1 **Claim 25 (previously presented):** A radio receiving method  
2 used for a radio receiver including a gain controlling means  
3 for controlling a gain of the radio receiver, and an error  
4 rate measuring means for measuring an error rate of the  
5 received signal, comprising:

6 a gain control amount setting step of setting a gain  
7 control amount of the gain controlling means in response to a  
8 measured result of the error rate measuring means;

9 a second controlling step of causing the gain controlling  
10 means to change a gain in response to the gain control amount;

11 a receiving step of performing a reception at the set gain  
12 control amount; and

13 an error rate measuring step of measuring the error rate  
14 in the receiving step by the error rate measuring means; and

15 wherein the gain control amount setting step decides a  
16 change direction and/or a change amount of the gain control  
17 amount in a succeeding reception based on a measured result by  
18 the error rate measuring means in a present reception, a  
19 measured result by the error rate measuring means in a

20 preceding reception, the gain control amount set in a present  
21 reception, and a set value of the gain control amount in the  
22 preceding reception.

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1 **Claim 26 (previously presented):** A radio receiving method  
2 according to any one of claims 24 or 25, further comprising:

3 a gain control amount range setting step of setting an  
4 available set range of the gain control amount, which is  
5 defined by a maximum value and a minimum value.

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1 **Claim 27 (previously presented):** A radio receiving method  
2 according to any one of claims 24 or 25, wherein the gain  
3 control amount setting step does not change a setting of the  
4 gain control amount when the gain control amount is more than  
5 the maximum value or is less than the minimum value of the  
6 available set range and a measured result by the error rate  
7 measuring means is less than a predetermined value.

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1 **Claim 28 (previously presented):** A radio receiving method  
2 according to any one of claims 24 or 25, further comprising:

3 a storing step of updating/holding the measured result by  
4 the error rate measuring means in the present reception as a  
5 measured result by the error rate measuring means in the  
6 preceding reception, updating/holding the gain control amount  
7 set in the present reception as the set value of the gain  
8 control amount in the preceding reception, and

9 updating/holding the gain control amount set by the gain  
10 control amount setting means in the present reception as the  
11 gain control amount set in a succeeding reception.

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1 **Claim 29 (currently amended):** A radio receiving method  
2 used for a radio receiver which includes a gain controlling  
3 means for controlling a gain of the radio receiver and an  
4 electric field intensity detecting means for detecting an  
5 electric field intensity of a received signal and also  
6 receives a signal having a signal format that is transmitted  
7 while changing transmission conditions into two types or more,  
8 comprising:

9 a gain control threshold setting step of automatically  
10 setting a threshold of an electric intensity level to start a  
11 gain control operation of the gain controlling means in  
12 response to the a transmission data speed condition of the  
13 received signal, ~~wherein said threshold setting is varied~~  
14 ~~depending on said transmission condition;~~ and

15 a first controlling step of causing the gain controlling  
16 means to start the gain control operation when the electric  
17 field intensity detected by the electric field intensity  
18 detecting means reaches the threshold of the electric  
19 intensity level.

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1 **Claim 30 (canceled).**

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**Claim 31 (previously presented):** A computer-readable recording medium for storing a program which causes a computer to execute a radio receiving method set forth in any one of claims 17, 18, 19, 24, 25, or 29.